CITY OF LODI
INFORMAL INFORMATIONAL MEETING
"SHIRTSLEEVE" SESSION
CARNEGIE FORUM, 305 WEST PINE STREET
TUESDAY, AUGUST 1, 2006

An Informal Informational Meeting ("Shirtsleeve" Session) of the Lodi City Council was held Tuesday, August 1, 2006, commencing at 7:01 a.m.

A. ROLL CALL

Present: Council Members – Beckman, Hansen, Johnson, and Mayor Hitchcock

Absent: Council Members – Mounce

Also Present: City Manager King, City Attorney Schwabauer, and Interim City Clerk Perrin

B. TOPIC(S)

B-1 "Presentation of developer responsibility for costs associated with electric line/service extension and possible changes"

George Morrow, Electric Utility Director, reported that staff has been researching how other electric utilities handle the cost sharing for line extensions, what the cost is for providing the service, and whether the City should update its current cost sharing procedure to provide for full cost recovery. Current City policy states that developers are responsible for substructures, which includes pipes, conduits, vaults, transformer pads, and pedestals, and the City is responsible for all other items, including wire, transformers, metering, extending lines, and overhead facilities. A majority of electric utilities place the responsibility for substructures on developers, including the physical work of installation; whereas, the City of Lodi performs the actual work and then charges the developer. Most electric utilities assign all other costs directly to new development or to those who require expansion of the system, and in Lodi, those costs are not currently passed on to developers. In comparison, Pacific Gas & Electric (PG&E), which is an investor-owned utility, rebates the developer/customer over time if it follows through on what it intended to do; otherwise, the rebate is not given and the developer/customer pays the costs. Generally, substation costs are not being assigned to developers; however, the city of Roseville is considering doing so, and the Sacramento Municipal Utility District and PG&E are currently assigning the costs if there is a direct, identifiable substation transmission cost associated with the development. In reviewing a four-year average, Lodi developers have been paying one third (or 33%) of the total cost package, and the City has been paying two thirds (or 67%). On average, this percentage represents $365,000 to $500,000 per year in expenses.

In response to Council Member Hansen, Mr. Morrow explained that historically electric utilities incurred all costs because it was a wealthy industry, the costs of distribution were small compared to the cost of new power plants, and the costs were eventually passed on to ratepayers through rates. As time passed, the costs became more significant, particularly with deregulation. Cities began growing dramatically, which prompted municipalities to begin passing the costs on to the developers. Lodi is at that point now where there is significant growth on the horizon, and this would help to realign some of the costs. This trend started about ten years ago, and five years ago most utilities began implementing full cost recovery methods.

In response to Mayor Pro Tempore Johnson, Mr. Morrow stated that there are presently four substations in Lodi. He believed there was enough capacity to serve the existing community, some future development within the current boundaries, and some new development over the next five to ten years should the City choose to annex additional land. At some point, however, new substations will be necessary for either capacity or for reliability. Regarding Delta College, Mr. Morrow believed that the two substations on the

east side of town would meet the increased needs. The concern would be growth in the southern portion of the community, as these areas are further away from existing substations, and it would be sensible to install another substation for better performance. Some electric utilities directly assign costs that are readily identifiable; whereas, others charge an assessment at the time of growth, which is what staff is recommending. Based on staff calculations, a generic substation would cost approximately $7.5 million, with a transmission cost of $400,000, and he believed the City would need another substation in five or so years.

Council Member Hansen questioned if the City could show that a new substation would be directly attributable to new development alone as opposed to both new development and existing service. Mr. Morrow responded that it would be the latter as the substation would be connected to the entire system, therefore, providing a benefit to the entire community.

Mayor Hitchcock questioned if a substation would be needed if the City had no further growth, to which Mr. Morrow responded in the negative; however, he explained that it may be needed in order to provide better reliability. Currently, there is a transmission line that brings bulk power from the PG&E Lockeford substation from the east; Lodi is impacted each time that substation experiences a problem, and it would be prudent to have another line coming into Lodi.

Mr. Morrow reported that the proposal from staff is that the developer/customer be responsible for all distribution system costs related to their expansion project and that there be an assessment for future substation transmission. The revenue from this proposal would be $500,000 that could be set aside for reserves and could eventually help to keep rates low. For a typical 200 amp residential lot, developers currently pay $750 and the City pays $1,050, and this proposal would move the City's cost to the developer. With the recommended assessment fee of $819 for substation transmission, the additional cost to the developer for a typical residential lot would be $1,869, for a total cost for electric expansion of $2,619.

In response to Mayor Pro Tempore Johnson, Mr. Morrow stated that the proposal does not change the type of equipment installed; the issue is who pays for it. During the recent heat wave, the City lost only 6 out of 3,600 transformers, where some utilities lost 10%.

In response to Council Member Beckman, Mr. Morrow explained that many investor-owned utilities manage their costs similar to PG&E, which may be due to their regulatory model and because they operate in hundreds of communities. Investor-owned utilities pass all of the costs through the rate base and make a profit on their investment. Mr. Beckman added that, in order to increase their customer base, they offer programs that do not penalize those who want to build in their area and he believed this put Lodi at a disadvantage to attract new business. Mr. Beckman felt that the City's transfer to the general fund from Electric Utility is considered a profit, as it is based on the number of customers. Mr. Morrow clarified that the City no longer transfers based on a percent of revenue; it is a flat rate. He stated that staff would check with the cities of Sacramento, Roseville, Turlock, and Modesto to see if this has negatively affected their expansion.

Council Member Hansen added that the City may not reimburse costs as does the investor-owned utilities; however, Lodi's industrial and commercial rates in certain categories have historically been lower, which he believed offset the cost issue for those looking to locate in Lodi.

With the aid of an overhead (filed), Deputy City Manager Krueger provided an overview of the various impact fees (i.e. water, sewer, storm drainage, etc.) that developers pay for a typical residential unit. With the proposed electric substation fee of $819 included, a typical residential development would pay a total of $20,500 in impact fees.

Council Member Hansen requested that staff provide a comparison of Lodi's impact fees with other cities in San Joaquin County when this matter comes back before Council.

City Manager King confirmed that various elements of the impact fees would increase at some point in the future and that the list did not include all of the impact fees (i.e. regional transportation impact fee, habitat conservation impact fee, etc.).

PUBLIC COMMENTS:

- Jeffrey Kirst stated that ten years ago the development community went from paying a fairly low rate to suddenly paying all associated costs. The development community had expressed to the City Manager at that time that it wanted to be on par with PG&E's rates, and in order to do so, it was determined that developers would pay for its portion of the wire and substructures for residential projects. He believed the reason PG&E reimbursed the money for the hard wiring was due to the fact that the California Public Utilities Commission ruled that the utility would be receiving a gift. He reiterated that the development community would like to be on parity with PG&E.

C. COMMENTS BY THE PUBLIC ON NON-AGENDA ITEMS

None.

D. ADJOURNMENT

No action was taken by the City Council. The meeting was adjourned at 7:49 a.m.

ATTEST:

Jennifer M. Perrin
Interim City Clerk

MEMORANDUM
Office of George F. Morrow, Director

TO: Blair King, City Manager
FROM: George F. Morrow, Electric Utility Director
DATE: July 27, 2006
SUBJECT: Developer Cost Responsibility for Electric Line/Service Extension

---

Currently, the cost of electric distribution system expansion is shared between the Lodi Electric Utility Department (EUD) and developers/customers requiring new or expanded service.

EUD is responsible for furnishing and installing the 12kV (primary voltage) underground main feeders, overhead distribution system (including transformers and conductors), power substations and the transmission facilities for 60kV and above. EUD also furnishes and installs electric service (120/240V) conductor (e.g. wire).

Developers provide trenching, excavation, backfill and compaction for 12kV and 120/240V underground systems. The developer also installs all required substructures such as vaults, conduits, transformer pads, pedestals, etc. (In the rare circumstance that a new development is not contiguous to EUD's system, the developer may also be required to pay to extend the electric system to the edge of the development.)

Staff reviewed the policies of other electric utilities in the region to ascertain how the cost of extending and/or expanding electric utility service to new customers was being handled. Electric utility service extension costs generally fall into two categories covered by EUD's Rules & Regulations No. 15 (Extension of Facilities – Primary/Secondary Voltage) and No. 16 (Service Connections, etc).

Tables 1 and 2 below document the findings of EUD's review of other nearby utility service policies related to how electric distribution system expansion costs are being charged to new developments:

Table 1: Extension of Primary/Secondary Facilities (Rule 15)

Question: Is the Developer responsible for the cost of primary/secondary electric extensions?

Utility	Trench & Backfill	Substructures	Conductors & Transformers	Substations & Transmission
City of Roseville	Yes	Yes	Yes	Being Considered
Modesto Irrigation District	Yes	Yes	Yes	No
Turlock Irrigation District	Yes	Yes	Yes	No
Sacramento Municipal Utility District	Yes	Yes	Yes	Sometimes
Pacific Gas & Electric Company	Yes	Yes	Yes/No	Sometimes
Lodi Electric Utility Department - Current	Yes	Yes	No	No
Lodi Electric Utility Department - Proposed	Yes	Yes	Yes	Yes

Table 2: Service Connections & Facilities on Customer's Premises (Rule 16)

Question: Is the Developer responsible for the cost of providing & installing service connections & facilities?

Utility	Trench & Backfill	Substructures	Conductors & Transformers
City of Roseville	Yes	Yes	Yes
Modesto Irrigation District	Yes	Yes	Yes
Turlock Irrigation District	Yes	Yes	Yes
Sacramento Municipal Utility District	Yes	Yes	Yes
Pacific Gas & Electric Company	Yes	Yes	Yes/No
Lodi Electric Utility Department - Current	Yes	Yes	No
Lodi Electric Utility Department - Proposed	Yes	Yes	Yes

Tables 1 and 2 show that the majority of surveyed utilities place most/all of the cost of providing *new/additional services on the requesting customer/developer.* The Sacramento Municipal Utility District and the City of Roseville are examples of electric utilities that have moved to a full cost recovery model in recent years.

As noted earlier, EUD places cost responsibility on developers/customers only for conduit and substructure costs on the project site. EUD is responsible for remaining costs such as providing/installing conductor (e.g. electric cable) and transformation equipment on the project site.

It should be noted that the "generic" cost of providing additional substation capacity (and associated transmission facilities to integrate the substation into the electric network) has generally not been assigned to developers by utilities in the area. Some area utilities (i.e. SMUD and PG&E), however, will charge any direct substation costs if clearly incurred as the result of a development. A brief survey of utilities nationally found that a growing number of electric utilities also charge for substation-related costs incurred.

What has been EUD's historical cost experience for expanding its electric system to provide new/enhanced service?

The actual cost of expanding the City's electric distribution system to serve new developments (residential and commercial) for fiscal years 2002 through 2005 is shown in Table 3. The four-year average of combined total cost of improvements is approximately $545,000 of which the City incurred 67% of the cost (~$365Kyear) while the developer was responsible for 33% of extension costs (~$180K/year).

Table 3: *Costs of Electric Distribution System Expansion*

YEAR	Paid by City	Paid by Developers
	Line Extensions & Services	Substructures
2002	$ 300,484.00	$ 141,453.00
2003	$ 304,795.00	$ 186,614.00
2004	$ 398,753.00	$ 190,544.00
2005	$ 458,925.00	$ 204,715.00
Total	$ 1,462,957.00	$ 723,326.00
Average	$ 365,739.25	$ 180,831.50
Percentage	67%	33%

Note: Costs of transmission and substation facilities are not included.

Staff was also interested in knowing how electric extension costs have been shared between EUD and developers for residential subdivisions only. Table 4 shows the cost of improving the electric distribution system to serve various residential subdivisions in recent years. The calculated total cost per residential lot is approximately $1,800 in which 58% was paid by EUD (~$1050/lot) and 42% was incurred by developers (~$750/lot).

Table 4: *Costs of Electric Distribution System Expansion -- Residential Subdivisions*

Cost Code	Number of Lots for Residential Subdivision						Total	Cost per Lot	Percentage
	11	74	77	27	28	16	233		
Line Extensions/Services	$24,260	$65,802	$62,384	$32,053	$18,022	$42,264	$244,785	$1,051	58%
Substructures	$22,115	$42,329	$61,892	$19,295	$16,568	$14,462	$176,661	$758	42%

Note: Costs of transmission and substation facilities are not included.

It should be noted that in both expense tabulations above, the cost of commissioning the developer-furnished/installed streetlights by the City and the cost of improving the City's transmission and substation facilities were not included.

Staff believes that the City should consider modifying EUD's Rules & Regulations (15 and 16) to allow the utility to capture the full cost of expanding its electric distribution system. These costs include distribution line extensions, substructures, transformation and service connections. Costs of improvements for the expansion of transmission and substation facilities should also be borne by the developer – note that these two costs are not addressed at all in current cost sharing rules.

Table 5 on the next page illustrates the calculation of substation costs and of a "full cost" developer assessment for a typical (200A) residential property.

Table 5: Substation/Transmission Cost Calculations			
I. 60kV to 12kV Distribution Substation:			
Effective Capacity =		48.00	MVA
No. of Distribution Feeders =		8	Circuits
No. of Power Transformers =		2	Units
Substation Lot Size =		40,000	sq ft
Distribution Substation Cost =	$	7,444,500	
II. 60kV Transmission Line:			
Typical Line Length to the Substation =		5.00	miles
60kV Transmission Cost =	$	420,000	
III. Typical Distribution Substation Facility Cost:			
Total (Substation + Transmission) Cost =	$	7,864,500	
Cost per kVA =	$	163.84	2006$

Summary

Presently, developers/customers requiring expanded electric service in Lodi are generally responsible only for the cost of underground substructures (i.e. conduit and vaults). Many electric utilities have moved to a "full cost recovery" model for expanding electric facilities.

Looking at historical costs, EUD has been paying about ⅔ of the cost to extend new service while developers/customers have been paying about one-third. For recent larger-scale residential developments, EUD has paid about 58% of costs with developers being responsible for the remainder.

Under a "full cost recovery" model, developers would pay all future costs for electric service extensions. A developer's cost to extend services to a typical residential lot (200A) under this approach would increase from $750/lot to about $1800/lot. In addition, Staff suggests that new development outside current City boundaries (i.e. as of 8/1/06) be assessed a charge for the addition of future substations and associated transmission lines. In 2006 dollars, the cost of a standard substation is calculated to be $163.84 per KVA (kilovolt-ampere) which would add $1146.91 to the cost of a typical 200A residential electric service.

Cost Summary for Typical Residential Unit (200A)

Substructure Costs	$750	Presently paid by Developer
Line Extension & Service Costs	$1,050	Presently paid by EUD
Substation/Transmission	1,147	Presently EUD Responsibility
Fully Allocated Costs	**$2,947**	**Proposed to be paid by Developer**

Please let me know if you have any questions or require any additional information on this subject.

George F. Morrow
Electric Utility Director

Extension of Electric Facilities

Shirtsleeve Session

August 1, 2006

Questions

- What is EUD's current policy for sharing the cost of electric line/service extensions?
- What are the practices of other electric utilities in this regard?
- What has been EUD's historical cost experience related to system expansion?
- What are the "full costs" associated with electric system extensions?
- Should EUD to update/modify its cost sharing policy to provide for full cost recovery?

EUD Current Policy

- **Developer** responsible for cost of installing substructures:
  - Conduit, vaults, transformer pads, pedestals
- **EUD** responsible for all other costs:
  - Conductor, transformers, metering, etc. for primary, secondary and service lines (overhead or underground)

Note: Developer may also be responsible for costs to connect non-contiguous development.

Utility Survey Results (1)

Is the Developer responsible for the cost of primary/secondary electric extensions?

Utility	Substructures	All Other
City of Roseville	Yes	Yes
Modesto Irrigation District	Yes	Yes
Turlock Irrigation District	Yes	Yes
Sacramento Municipal Utility District	Yes	Yes
Pacific Gas & Electric Company	Yes	Yes/No
Lodi Electric Utility - Current	**Yes**	**No**
Lodi Electric Utility- Proposed	**Yes**	**Yes**

Utility Survey Results (2)

Is the Developer responsible for the cost of providing & installing service connections & facilities?

Utility	Substructures	All Other
City of Roseville	Yes	Yes
Modesto Irrigation District	Yes	Yes
Turlock Irrigation District	Yes	Yes
Sacramento Municipal Utility District	Yes	Yes
Pacific Gas & Electric Company	Yes	Yes/No
Lodi Electric Utility - Current	**Yes**	**No**
Lodi Electric Utility - Proposed	**Yes**	**Yes**

Utility Survey Results (3)

Is the Developer responsible for the cost of substations and associated transmission?

Utility	Substations & Transmission
City of Roseville	Being Considered
Modesto Irrigation District	No
Turlock Irrigation District	No
Sacramento Municipal Utility District	Sometimes
Pacific Gas & Electric Company	Sometimes
Lodi Electric Utility - Current	**No**
Lodi Electric Utility- Proposed	**Yes**

Utility Surveys -- Summary

- Most electric utilities in the region have adopted a “full cost” recovery model
- “Generic” substation/transmission cost recovery is done in specific circumstances but being considered on a broader basis

Historical EUD Costs

YEAR	Paid by City	Paid by Developers
	Line Extensions & Services	Substructures
2002	$ 300,484.00	$ 141,453.00
2003	$ 304,795.00	$ 186,614.00
2004	$ 398,753.00	$ 190,544.00
2005	$ 458,925.00	$ 204,715.00
Total	$ 1,462,957.00	$ 723,326.00
Average	**$ 365,739.25**	**$ 180,831.50**
Percentage	67%	33%

Residential Subdivision Costs

For actual residential subdivisions over the past couple of years, EUD has paid 58% of costs with the developer paying the remainder.

	Number of Lots for Residential Subdivision						Total	Cost per Lot	%
	11	74	77	27	28	16	233		
Line Extensions/Services	$24,260	$65,802	$62,384	$32,053	$18,022	$42,264	$244,785	$1,051	58%
Substructures	$22,115	$42,329	$61,892	$19,295	$16,568	$14,462	$176,661	$758	42%

Substation Capacity

- EUD currently has **four** distribution substations.
- These 4 substations are believed sufficient for existing and in-fill development in the city.
- In the short run, the new developments under discussion can also be served from existing substations.
- In the longer run (5 to 10 years), the west/southwest and/or south/southeast areas are possibilities for locating new substations.

Substation Cost Survey

- **Ludlow, VT** -- all cost of required substation/transmission
- **Mountain View Electric Association, CO** – all cost of required substation/transmission
- **Fort Collins, CO** – Electric Capacity Fee
- **Longmont, CO** – Electric Community Investment Fee
- **Burbank, CA** – Off-site Facilities Fee
- **SMUD, CA** – 1 MW or larger, all costs
- **PG&E** – all cost of required substation/transmission (Woodland, CA)

Substation Cost Computation

I. 60kV to 12kV Distribution Substation:				
		Effective Capacity =	48.00	MVA
	No. of Distribution Feeders =		8	Circuits
	No. of Power Transformers =		2	Units
		Substation Lot Size =	40,000	sq ft
	Distribution Substation Cost =		$ 7,444,500	
II. 60kV Transmission Line:				
Typical Line Length to the Substation =			5.00	miles
	60kV Transmission Cost =		$ 420,000	
III. Typical Distribution Substation Facility Cost:				
Total (Substation + Transmission) Cost =			$ 7,864,500	
		Cost per kVA =	**$ 163.84**	2006$

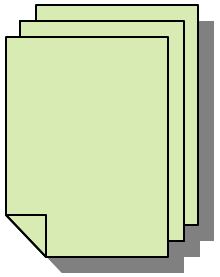
Summary

- **EUD** is incurring the majority of costs for expanding the electric distribution system for growth
- Many utilities pass all such costs to developers/customers

- **EUD** should consider adopting a “full cost” recovery model for distribution expenses

Staff Proposal

- Adopt a “full cost” recovery model for distribution expenses for system growth
  - Developer/customer to be responsible for all electric system costs related to their development or expansion project
  - Development outside current City boundaries to pay a substation/transmission assessment of ~$164 per KVA.
- This would result in annual fiscal benefit to electric fund (~$500K)



Sample Cost -- Residential

Current Developer Costs	
-- Substructure	$750
Additional Developer Costs	
-- Line Extension & Services	**$1,050**
-- Substation/Transmission (outside City limits only)	**$819**
Total Costs	$2,619

$1,869

Note: 1. Example is for typical 200A Residential Service
2. Substation Charge is lower than staff report

Typical Residential Cost Comparison

Truckee	$1500
Roseville	$1300
Sacramento (SMUD)	$1050
Turlock (TID)	$1300
Lodi	**$1050**

Note: The above is the cost for line extension and services. **The "substructure" costs are identical for each since it is developer physical responsibility.**

Questions/Comments

Low Density Residential
($ per residential unit)

Service Category	Existing Impact Fee [1]
Water	$1,060
Sewer [2]	$5,166
Storm Drainage	$2,078
Streets [3]	$3,016
Police	$417
Fire	$407
Parks & Recreation	$5,854
General City	$1,683
Art In Public Places	included
Total	$19,681

Electric	$819
Total with Electric	$20,500

[1] For purposes of this comparison, the acre-based fees of the existing program are converted to unit-based fees using 4.5 units/acre. This is comparable to the density built in the Century Meadows area.

[2] Sewer fee assumes 2-bedroom home.

[3] Streets fees include the Lower Sacramento Road portion but not the County-wide regional transportation impact fee.